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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/491,991	01/26/2000	Dean Cheng	081862.P167	9322

7590 05/19/2004

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EXAMINER

TODD, GREGORY G

ART UNIT	PAPER NUMBER
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2157

13

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/491,991

Applicant(s)

CHENG ET AL.

Examiner

Gregory G Todd

Art Unit

2157

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

This is a third office action in response to applicant's amendment and request for continued examination filed, 27 February 2004, of application filed, with the above serial number, on 26 January 2000 in which claims 1, 10, 18, 27, 35, and 44 have been amended and no new claims have been added. Claims 1-51 are therefore pending in the application.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukuta et al (hereinafter "Fukuta", 5,090,011) in view of Fedyk et al (hereinafter "Fedyk", 6,560,654).

3. As per Claims 1 and 18, Fukuta discloses a method and a computer program product, wherein Fukuta discloses:

determining a congestion status associated with a node in the network (at least col. 4, lines 55-62; col. 7, lines 39-47); and

broadcasting the congestion status to at least one other node in the network (at least Fig. 1, 13).

Fukuta fails to disclose the congestion status notice being broadcast to other nodes in a peer group. However, the use and advantages for broadcasting such information is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Fedyk. Fedyk discloses broadcasting of link information including network congestion to other inflicted nodes on a network (at least col. 1 line 34 - col. 2 line 21; specifically, col. 13, lines 7-11). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Fedyk's network encompassing broadcasting of such notifications into Fukuta's system as this would enhance Fukuta's system so that the congestion notice is sent not only to the source node but, for example, to the destination node as well in order for the destination node to be informed and aware of such network properties affecting communication.

4. As per Claims 2, 19, and 36.

measuring a node condition (threshold value) at the node, the node condition corresponding to the congestion status (at least col. 12, lines 1-15).

5. As per Claims 3, 20, and 37.

setting a transit flag, the transit flag being accessible to the at least one other node (at least col. 15, lines 19-26).

6. As per Claims 4, 12, 21, 29, 38, and 46.

the node is one of a transit node and a terminating node (at least Fig. 13).

7. As per Claims 5, 13, 22, 30, 39, and 47.

the node is a logical node in a hierarchical network, the logical node corresponding to a peer group of nodes (at least col. 6, lines 14-28; Fig. 11A, 11B, 4, 16).

8. As per Claims 6, 23, and 40.

the at least one other node is one other logical node in the hierarchical network, the one other logical node corresponding to one other peer group of nodes (packet switch and packet terminal equipment) (at least col. 6, lines 14-28; Fig. 11A, 11B, 4, 16).

9. As per Claims 7, 15, 24, 32, 41, and 49.

the network is an asynchronous mode transfer (ATM) network (at least col. 1, lines 11-20).

10. As per Claims 10 and 27, Fukuta discloses a method and a computer program product to manage congestion in a network, the method comprising:

receiving a congestion status (congestion notice) associated with a node in the network, the congestion status corresponding to a measured node condition at the node and being broadcast by the node; and

routing a call to the node based on the received congestion status (polling) (at least Fig. 26; col. 16, lines 21-40).

Fukuta fails to disclose the congestion status notice being broadcast to other nodes in a peer group. However, the use and advantages for broadcasting such information is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Fedyk. Fedyk discloses broadcasting of link information including network congestion to other inflicted nodes on a network (at least col. 1 line 34

Art Unit: 2157

- col. 2 line 21; specifically, col. 13, lines 7-11). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Fedyk's network encompassing broadcasting of such notifications into Fukuta's system as this would enhance Fukata's system so that the congestion notice is sent not only to the source node but, for example, to the destination node as well in order for the destination node to be informed and aware of such network properties affecting communication.

11. As per Claims 11, 28, and 45.

accessing a transit flag set by the node, the transit flag corresponding to the congestion status (at least col. 15, lines 54-64)..

12. As per Claims 14, 31, and 48.

routing the call to the node if the node is a terminating node; and  
routing the call to the node if the node is a transit node and the congestion status indicates that the node is not congested (polling) (at least Fig. 13, 26; col. 16, lines 21-40).

13. As per Claim 35, Fukuta discloses a system interfacing to a network wherein Fukuta discloses:

a processor coupled to the network (at least col. 15, lines 19-26); and  
a memory coupled to the processor (at least col. 15, lines 19-26), the memory managing congestion in the network, when executed causing the processor to:  
determine a congestion status associated with a node in the network (at least col. 4, lines 55-62; col. 7, lines 39-47); and

broadcasting the congestion status to at least one other node in the network (at least Fig. 1, 13).

Fukuta fails to disclose the congestion status notice being broadcast to other nodes in a peer group. However, the use and advantages for broadcasting such information is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Fedyk. Fedyk discloses broadcasting of link information including network congestion to other inflicted nodes on a network (at least col. 1 line 34 - col. 2 line 21; specifically, col. 13, lines 7-11). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Fedyk's network encompassing broadcasting of such notifications into Fukuta's system as this would enhance Fukuta's system so that the congestion notice is sent not only to the source node but, for example, to the destination node as well in order for the destination node to be informed and aware of such network properties affecting communication.

14. As per Claim 44, Fukuta discloses a system interfacing to a network wherein Fukuta discloses:

a processor coupled to the network (at least col. 15, lines 19-26); and  
a memory coupled to the processor (at least col. 15, lines 19-26), the memory managing congestion in the network, when executed causing the processor to:

receive a congestion status (congestion notice) associated with a node in the network, the congestion status corresponding to a measured node condition at the node and being broadcast by the node; and

route a call to the node based on the received congestion status (polling)  
(at least Fig. 26; col. 16, lines 21-40).

Fukuta fails to disclose the congestion status notice being broadcast to other nodes in a peer group. However, the use and advantages for broadcasting such information is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Fedyk. Fedyk discloses broadcasting of link information including network congestion to other inflicted nodes on a network (at least col. 1 line 34 - col. 2 line 21; specifically, col. 13, lines 7-11). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Fedyk's network encompassing broadcasting of such notifications into Fukuta's system as this would enhance Fukata's system so that the congestion notice is sent not only to the source node but, for example, to the destination node as well in order for the destination node to be informed and aware of such network properties affecting communication.

15. As per Claims 8, 16, 25, 33, 42, and 50.

Fukuta fails to disclose the node being one of a private network-to-network interface (PNNI) node. However, the use and advantages for using such an interface is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Fedyk. Fedyk discloses using a PNNI interface within his network (at least col. 3, lines 30-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate and implement the use of a PNNI node in a network being able to monitor and advertise congestion statuses with other nodes on the network since it would allow for the PNNI node to operate over



Art Unit: 2157

existing network implementations and therefore enhance the expendability and compatibility of Fukuta's network.

16. As per Claims 9, 17, 26, 34, 43, and 51.

Fukuta fails to disclose the transit flag being one of a PNNI topology state parameter. However, the use and advantages for using such an interface is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Fedyk. Fedyk discloses using PNNI topology state packets within his network (at least col. 3, lines 30-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate and implement the use of a PNNI topology state in an ATM network enabling monitoring and advertising congestion statuses with other nodes on the network since it would allow for the PNNI node to operate over existing network implementations and therefore enhance the expendability and compatibility of Fukuta's network by having the PNNI parameters encapsulated within the packets used on the ATM network.

### ***Response to Arguments***

17. Applicant's arguments, see page 9 of paper 12, filed 27 February 2004, with respect to the rejection(s) of claim(s) 1-51 under Fukuta have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Fedyk et al.

### ***Conclusion***

Art Unit: 2157

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Newly cited Cherukuri et al and Gao et al in addition to previously cited Yamato et al, Cha et al, Fukuta et al, Pajuvirta et al, Mairs et al, Daines et al, Song, Murase, Nishihara, Ginossar, Kirschenbaum, and Milles are cited for disclosing pertinent information related to the claimed invention. Applicants are requested to consider the prior art reference for relevant teachings when responding to this office action.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory G Todd whose telephone number is (703)305-5343. The examiner can normally be reached on Monday - Friday 9:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (703)308-7562. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 09/491,991  
Art Unit: 2157

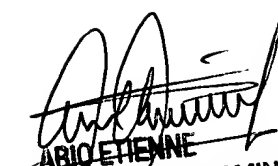
Page 9

Gregory Todd



Patent Examiner

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